WHO PAID FOR THE WAR?

In a recent article Professor Davenport presents a striking argument in support of the thesis that labor has already paid the main cost of the war and, moreover, will pay it over again in the future.[1] Briefly summarized, his argument runs as follows: The cost of the war must be met out of contemporaneous income; as there was no war-time increase in production, the war needs must have been supplied, therefore, from a decrease in consumption; the upward tendency of prices during the war period was more marked than the similar tendency of money wages; this lag of wages behind prices resulted in a great increase in profits; these profits were lent to the government to finance the war; the war loans will be repaid by taxation which will fall chiefly on the working classes; labor will in this manner pay the cost of the war twice over, once to the capitalistic class in the form of inflated profits, and once to the government to provide it with revenue wherewith to repay the borrowed war-time profits.

Professor Davenport's conclusions are assuredly not in keeping with the general impression regarding the incidence of the war burden. Complaints of excessive taxation and of class discrimination have come mainly from the business world, and the current attempts of labor to secure wage increases have been widely excoriated as profiteering by government officials, the press, and to a less extent by economists, to say nothing of manufacturers' associations and chambers of commerce. But most of the problems raised for discussion by Professor Davenport are fundamentally quantitative in character; they are subject to inductive verification if statistical data can be found covering the points of relative wage and price advances; war-time production, income, and consumption; and the sources of government revenue. Where statistics are not available, facts of common knowledge may be

[1] H. J. Davenport, "The War-Tax Paradox," *American Economic Review*, March, 1919.

at hand, whereby the reasoning of Professor Davenport, largely a priori in character, may be tested. What follows is mainly an attempt to use the available factual material to test the accuracy of his conclusions, and to throw further light on the incidence of the war cost.

WAR BURDEN CANNOT BE TRANSFERRED TO FUTURE

The reasoning that the cost of the war, for a country which cannot or does not borrow from abroad, must be borne from current income, is generally accepted by economists. What is not yet existent cannot meet a present need. The economic war burdens created by a present generation cannot be transmitted to the future, to be borne by subsequent generations. Financing through loans does not postpone the burden, but merely provides the lenders of present income with a promise that the government will at a later date transfer to them in repayment portions of the future income of other members of the community. The amount of the current drain upon national income is not altered by the method of financing used by the Treasury, unless of course the method used affects the relative degree in which contributions to the Treasury are made out of income and capital resources.

Professor Seligman, it is true, discovers a fallacy in such reasoning, arising out of an alleged failure to discriminate between objective and subjective sacrifices.[1] The bondholder, he claims, incurs little or no net subjective sacrifice in surrendering his funds to the government, since he would have invested his surplus income in any case, and is compensated for such temporary surrender of his funds by the receipt of interest. If he were to contribute through taxation, on the other hand, there would be an immediate subjective sacrifice. To the extent, therefore, that recourse is had to borrowing instead of taxation, to that extent the amount of immediate subjective sacrifice is reduced. When in the future the burden of taxation is placed upon the citizen in order that the government may redeem its bonds, there is no offsetting subjective benefit to the bondholder, but on the contrary he suffers a further burden in being obliged to find a new

[1] E. R. Seligman, "Loans versus Taxes in War Finance," *Annals of the American Academy of Political and Social Science*, XXV (Whole No. 164), 63 ff.

field for the investment of his funds. The burden placed on the taxpayer of the future in order to redeem war bonds, Professor Seligman concludes, is therefore not offset by a contemporaneous benefit to another group, but is an initial sacrifice toward financing the war, which sacrifice, by means of loan financing, had been hitherto postponed.

But this reasoning, it appears to the writer, is open to serious criticism, and is not a valid objection to the position generally taken by economists. The sacrifice involved in lending is the postponement of consumption during the currency of the loan; the sacrifice involved in the payment of taxation is the permanent surrender of means to consumption; the difference between lending and taxpaying is in the future, not in the present. If the loan were repudiated upon maturity, the bondholder would readily perceive the benefits arising to him from repayment, and the fact that he takes such repayment as a matter of course does not appreciably subtract from the amount of subjective satisfaction derived from it. If Professor Seligman's reasoning were accepted and given its logical applications, all consumers' surpluses would be lightly regarded by economists, since, except when the consumer is in danger of, or in process of, losing them, they secure only very fragmentary recognition in consciousness.

In one sense only can the economic burden of the war be handed on to a future generation, and that is by a diminution of the bequest made by the war-time generation to succeeding ones, whether this diminution be absolute or only in comparison with what would have been handed on if there had been no war. The war expenditures must be met out of current goods, but these goods may be part of the capital resources instead of part of the current net income. Through consumption of existing stocks, through failure to maintain and to replace depreciating plant and equipment, through the more intensive exploitation of natural resources, the capital of a belligerent may be partially destroyed by war, even though no invader crosses its borders. An analogous situation arises if the resources existing at the outbreak of the war are maintained undiminished, but the increase in these resources which would have accrued in normal times does not take place

owing to war-time conditions. In each case the next generation is poorer than it would have been if there had been no war, or if the war cost had been met without making inroads upon the wealth accumulated in the past and without reducing below the normal rate the amount added to these past accumulations during the war period.

CAPITAL RESOURCES OF NATION NOT IMPAIRED BY WAR

There is little evidence, however, to suggest that the capital resources of this country have been significantly impaired as a result of the war. Stocks of goods in warehouses and in retail stores may have been smaller at the signing of the armistice than prior to the entrance of the United States into the war; statistics are not available for a reliable judgment. But such statistics as have come to the writer's notice indicate that for many raw materials and foodstuffs, including such important commodities as copper, cotton, tea, coffee, wheat, the stocks on hand at the cessation of hostilities were unprecedented in volume. Buildings, railroads, highways, were not kept at their pre-war standards of maintenance and repair; extensions were undertaken at very much below the normal rate. But new capital in enormous quantities was turned into the construction and equipment of the greatly enlarged shipbuilding and shipping, chemical, dye, ordnance, and munition industries, was absorbed in the development of hitherto unexploited mineral and timber resources, and was used to purchase American securities held abroad, to make foreign loans, to build up a great reserve of gold obtained from abroad. Some of this new accumulation has proved to be of little value for peacetime purposes; the cases of conspicuous depreciation have received considerable publicity; but the bulk of it remains as a valuable addition to the working equipment of the United States.

Professor Friday has estimated, largely from data collected by the Treasury for fiscal purposes, the capital savings of the nation during the war period as compared with 1912.[1] He finds the new savings in 1917 and 1918 to have been 18 and 22 billion dollars

[1] David Friday, "The War and the Supply of Capital," *American Economic Review Supplement*, March, 1919, p. 91.

respectively, as compared with new savings of 6.5 billions in 1913 and of 9 and 14.5 billions in 1915 and 1916 respectively. He gives no estimate for 1914. If the amount of new savings for 1913 be taken as a normal pre-war figure—it appears to have been greater than the figure for the immediately preceding years—the total accretion of capital was in excess of the normal rate by 27 billions of dollars in the two war years[1] and by 10.5 billions in the two given years of neutrality.[2]

These figures are subject to correction from two directions before they can be accepted as satisfactory indexes of the total amount of the national income withheld from civilian consumption during the war period. Because of the depreciation in the standard of value since 1913, the figures for the later years exaggerate the real volume of new savings. On the other hand, the estimates are based largely on income returns made for taxation purposes, and as the period was marked by a sharp rise in the rates of taxation, there was an undoubted tendency toward undervaluation of income. These two sources of error thus tend to offset each other. It will be shown later that the amount of increase in new savings indicated by Friday's figures was sufficient to meet the cost of the war.[3] If the increase in national income over the normal pre-war rate can be shown to have been equal to this increase in national savings, then the war cost was met without any reduction in the national average standard of living.

INCREASE IN NATIONAL PRODUCTION IN WAR YEARS

Professor Davenport claims, however, that there was no increase in production during the war period, and that the war cost was met by a decrease in consumption. Although no means are available for an estimate of the normal percentage of employment of the labor and capital resources of the nation during normal times, it would be generally admitted that, on the average, through a peace-time period long enough to cover both the prosperity and

[1] $(18+22)-(2\times6.5)=27(=8.5$ on the basis of 1913 prices).

[2] $(9+14.5)-(2\times6.5)=10.5(=7.8$ on the basis of 1913 prices).

[3] The possibility that some of these savings may have lost their value after the cessation of hostilities has already been indicated.

depression phases of the business cycle, very considerable percentages of both labor and capital are idle and unproductive. During the war period there was an approximation to complete utilization; labor worked full time and even overtime; plant and equipment were utilized to near their utmost capacity; intensive training enabled many men to turn from unskilled to skilled labor; the period of production from the extraction of the raw material to the turning out of the finished article was shortened through more rapid turnover of stocks at each stage.

The loss in the labor supply through the withdrawal of men for the army and navy was offset by the entrance of women into industry, by the postponement of retirement of the older employees and by the earlier entry of youths into industry, by the entrance into the ranks of labor of men non-productively occupied in normal times. In England, where a much greater percentage of the male population was withdrawn for military purposes, a recent official statistical survey showed that the industrial labor force was practically maintained by the entrance of women into industry, and by the postponing of retirement of older employees and hastening of entry into employment of youths. Between July, 1914, and July, 1918, approximately 5,000,000 men in England entered military service out of a total male working population at the outbreak of the war of 10,500,000, a withdrawal from the male working force of about 47 per cent of its numbers. The replacements by 1918, including, however, demobilized soldiers, lacked only 6 per cent of equaling the withdrawals. Owing to the smaller number withdrawn for military service in this country, the greater annual accretions of workers, the larger reserve supply of labor, there was probably no net reduction in the total number of workers as a result of the war. As compared with 1913 and 1914 there may have been a substantial increase.

There is some danger, however, of exaggeration. Production was already near its peak in 1916, or prior to the entrance of the United States into the war, and a comparison of the war years with the years of neutrality would not give as favorable results as would a comparison with the pre-war years. Moreover, the recruiting of labor for the war industries was effected in large part through

withdrawals from other industries or from household work. Professor Wolfe states that "most of the women who went into war industry came from other industries in which they had previously gained a livelihood," and that "the three important non-industrial sources were doubtless (1) domestic service, from which came considerable numbers for the factories; (2) teachers, 100,000 of whom are said to have left the low pay of the schoolroom for clerical and munitions work; (3) wives and mothers of soldiers."[1] The male labor for the war industries also came mainly from the other industries. But with a labor force at work in approximately its maximum numbers, at almost full time, utilizing the increased capital equipment of the country to an extent approaching maximum capacity, and all under especially high pressure, there is strong presumptive reason to believe that the war-time production in this country was substantially greater than the pre-war production and at least as great as the production during the period of neutrality.

More concrete evidence of an increase in production during the war period is available, however. Professor Wesley Mitchell, basing his estimates on the figures of production and importation for ninety staple raw materials, weighted both for differences in relative importance and for differences in the "fabrication factors" or costs of conversion to finished goods, has devised an index number for production during the war period from 1913 to 1918, which, taking 100 as representing the production in 1913, shows aggregate production to have been 99 in 1914, 107 in 1915, 111 in 1916, 114 in 1917, and 116 in 1918.[2]

There are several factors which may tend, under certain circumstances, to make an index such as this, based as it is on both production and import statistics for raw materials, exaggerate the amount of increase in production during the period under investigation. The inclusion of raw-material imports is essential if due weight is to be given to fabrication of raw materials. But if

[1] A. B. Wolfe and Helen Olson, "War-Time Industrial Employment of Women in the United States," *Journal of Political Economy*, XXVII (October, 1919), 640.

[1] Wesley C. Mitchell, "History of Prices During the War, Summary," *War Industries Board Price Bulletin No. 1*, p. 45.

imports of raw materials should increase during the period more rapidly than their domestic production, the resulting index would exaggerate the degree of increase in production. Conversely, a decrease or a slower rate of increase in imports as compared with domestic production of raw materials would operate to make the index minimize unduly the increase in production. But imports of raw materials, in terms of quantities, appear to have increased in about the same proportions as domestic production during the war period. As the fabrication cost is generally much greater than the raw-material cost, the possibility of substantial error arising from this source cannot be very great.

A possible source of more serious error is to be found in the probable tendency during the war period for a substitution of the manufacture of coarse and bulky war materials out of the raw materials instead of finely finished consumer's goods. The *Census of Manufacturers of 1914* was used by Professor Mitchell to determine the increment of value added to raw materials in the process of fabrication. The decline in the relative importance of cost of fabrication as compared with cost of production of raw materials in the period subsequent to 1914 would tend therefore to make Mitchell's index exaggerate the amount of increase in production. Against this, however, there is to be balanced the counter consideration that a smaller proportion of this country's exports consisted of crude and partially manufactured products and a greater proportion consisted of fully manufactured articles during the war years than during the period antecedent to the outbreak of hostilities. The resulting increase in the amount of fabrication for export done in this country finds, I think, no expression in Professor Mitchell's index, but is probably adequately corrected by the failure of his index to account for reduction in the amount of fabrication undergone by raw materials as a whole in the war period.

A third source of possible error arises from the fact that the index, since it is based wholly on figures of production of tangible goods, would not account for variations in the production of non-material services. There was undoubtedly a decrease in the amount of personal services such as domestic help, waiters' services,

education, etc., rendered during these years, and the importance of such material services in the national dividend can easily be underestimated. It has already been suggested that a substantial fraction of the increased labor at work in the war industries was withdrawn from the "personal-service industries." On the whole, however, it is probably safe to assume that these factors of error, some operating in one direction and some in the other, come near enough to counterbalancing each other, and that Mitchell's index may be accepted as a true enough measure of the trend for our purposes.

There was therefore increased production during the period subsequent to the outbreak of hostilities, and this increase was maintained throughout the period of American participation in the war. But unless this increase in production was of itself sufficient to meet the costs of the war, it would still be true that there was either a war-time decrease in civilian consumption or a decrease in capital resources or both. There was no decrease in capital resources. As shown, the probability is that there was an increase. Was there a decrease in national consumption?

NO DECREASE IN AVERAGE NATIONAL STANDARD OF LIVING DURING WAR PERIOD

To the casual observer, there was not apparent any marked reduction in the average standard of living during the war period. On the contrary, there were many surface indications that the nation was living better, more comfortably, in enjoyment of more conveniences and luxuries during the war period than ever before. It appeared from rough statistical calculations made during the war by government bodies in Washington, that coffee, tea, cocoa, chocolate, soft drinks, cheap jewelry, talking machines, silk shirts, among other commodities of like character generally classed as luxuries, were being consumed in unprecedented quantities, and from such evidence the impression became widespread that the nation as a whole and labor in particular were throughly enjoying the war. But figures of consumption, when only a short period is covered, are almost always, because of the only methods usually available for their compilation, of slight value even as showing a

trend. Increased production and increased imports may indicate only an increase in stocks and not in actual consumption. In the case of coffee and tea, paradoxical as it may seem, the general policy of restriction of imports was itself the cause of increased imports, which went into stock, but appeared in most estimates as increased consumption. The restrictions on imports were not applied to these commodities, but the importers, not believing that their special good fortune would last, took full advantage of their opportunity and made greatly increased imports in anticipation of future restrictions. In the case of tea at least, importers who had throughout the war period used up valuable shipping space in anticipation of the imposition of restrictions, shortly before the armistice, found themselves embarrassed by overgreat supplies and besought the imposition of restrictions on further imports "in order to economize shipping."

In the absence of satisfactory statistics of consumption some aid may perhaps be derived from Veblen's doctrine of conspicuous consumption. Increases of spending power would be more likely to be widely advertised, and decreases to be concealed from the vulgar gaze. This would be the easier since the items in which there was unquestionably great decrease in average consumption during the war period, as for example house-room and personal services in the home, were often such as would not attract general attention. Professor Davenport thinks there was a reduction in consumption. Professor Friday has stated his belief in an increase in consumption of somewhere in the neighborhood of 12½ per cent, but without indicating whether this estimate was intended to cover military as well as civilian consumption.[1] It appears to be a widely held opinion that there was a considerable increase in consumption during the war period. There is ground, however, for believing that the truth lies somewhere between, that there was no marked decrease in national consumption and no marked increase. This, of course, does not preclude the possibility that there may have been a considerable war-time redistribution of

[1] "Such statistics as are available show that consumption has not increased more than 12½ per cent during the same (i.e., the war) period."—*American Economic Review Supplement*, March, 1919, p. 91.

consumption, some groups increasing their consumption and others decreasing it. With regard to this possibility, something will be said later.

WAR COST COMPARED WITH WAR-TIME INCREASE IN NATIONAL INCOME

A more satisfactory method of approach to the problem whether the military expenditure demanded a reduction in the national standard of living is available through a comparison of the war cost with the war-time increase in national income. If the increase in national income was as great as the expenditure on the war, and if the capital resources at the end of the war were about what they would have been if the war had not taken place and the 1913 rate of accumulation had continued throughout, it would follow that there was no reduction in average national consumption. There follows an attempt at a quantitative comparison of the total war cost, the total war-time increase in national income, and the total private savings from income during the war period.

The national income for the United States for the year 1913 has been estimated by Anderson as 34.8 billions of dollars.[1] In the following table an estimate of annual national income is given for the years 1914 to 1918, obtained in terms of 1913 values by multiplying Mitchell's physical-production index for each year by Anderson's figure for the national income in 1913.

Year	Total Physical Production, W. C. Mitchell's Index	Aggregate Value Yearly National Income, on Basis of 1913 Prices in Billions of Dollars
1913	100	34.8
1914	99	34.5
1915	107	37.2
1916	111	38.6
1917	114	39.7
1918	116	40.4

The estimate of 34.5 billions as the aggregate national income in 1913 appears reasonable when compared with King's estimate of 30.5 billions for 1910,[2] with Friday's estimate of 6.5 billions as

[1] B. M. Anderson, Jr., in the *New York Times Annalist*, January 6, 1919.

[2] W. I. King, *Wealth and Income of the People of the United States.*

the new savings from income in 1913,[1] and with Mitchell's estimate of 17.4 billions as the value of the fabricated products of ninety raw materials produced in 1913.[2] The acceptability of Mitchell's index of production has already been discussed. The figures of gross production which result are accepted also as indicating gross income. Professor Anderson, although he admits the correspondence between production and income under normal conditions, claims that this correspondence ceases under war conditions, on the ground that soldiers, although withdrawn from production, still receive income. He concludes, therefore, that the diminution of production which results from the withdrawal of men for the army from industry is not accompanied by a corresponding diminution of national income.[3] But there is obviously a fallacy in this reasoning. Where does the income of the soldiers come from if not out of national production? The income of the soldiers represents an equivalent subtraction from the income of the civilian population, but the national income remains what national production makes it.[4]

The period from the entrance of the United States into the war to May 1, 1919, which is a convenient terminal date for our purposes, is longer than two years by 24 days. Assuming that real national income has been accruing during 1919 at the same rate as in the early part of 1917, the total income for 1917 and 1918 plus 24 days income at the 1917 rate may be taken as the total national income

[1] See *supra*, p. 50. [2] W. C. Mitchell, *op. cit.*, p. 45.

[3] *New York Times Annalist*, January 6, 1919.

[4] Professor Anderson, in the article cited, has himself made estimates of the annual national income for the years of the war period, but in terms of yearly prices calculated on the bases of Dun's price index and his own production index. His figures recalculated in terms of the 1913 price level throughout give the following results:

Year	B. M. Anderson's Production Index	National Income on Basis of 1913 Prices in Billions of Dollars
1913	100.0	34.8
1914	92.9	32.3
1915	97.8	34.0
1916	114.7	39.9
1917	116.7	40.6
1918	110.9	38.6

during the war period. At the 1913 level of prices, this gives a figure of 82.7 billions.[1]

The general staff has reported an estimate of $21,294,000,000 as the total cost of the war to the Treasury of the United States to May 1, 1919.[2] A calculation based on the monthly ordinary expenditures of the Treasury throughout this period indicates that approximately 10 per cent of this expenditure occurred in 1917, 60 per cent in 1918, and 30 per cent in 1919. Conversion to the 1913 basis of prices with the use of the Bureau of Labor Statistics Wholesale Price Index gives a total war cost for the period, in terms of 1913 prices, of 10.4 billions of dollars, or 12.6 per cent of the war-time national income.

In 1917 and 1918 there were annual increases in national income over the 1913 rate of 4.9 and 5.6 billions of dollars respectively, in terms of 1913 prices. To this should be added 0.3 billion of dollars increase for the 24 days by which the period taken as the war period exceeded two years, estimated on the basis of 1919 income being equal to 1917 income, making a total increase of income for the war period above the 1913 rate of 10.8 billions.[3] The increase of income during the war period as compared with the 1913 rate of income was almost exactly equal to the cost of the war.

The total increase in the rate of new savings from income during the years 1917 and 1918 above the 1913 rate, when reduced to the 1913 basis of prices, was 8.5 billions of dollars.[4] If to this figure be added an allowance for the new savings in the additional 24 days by which the war period exceeded two years and a further allowance for a substantial amount of undervaluation of income in the returns upon which Professor Friday's estimates were based, there would result as an estimate of the total amount of new savings

[1] 39.7+40.4+2.6=82.7.

[2] *New York Times*, May 18, 1919. Professor Bogart at about the same time independently reached an estimate of $22,625,000,000 as the total war cost. E. L. Bogart, "Direct and Indirect Costs of the Great World War," *Preliminary Economic Studies of the War*, No. 24, p. 267. Carnegie Endowment for International Peace. It would be proper to add, however, the amounts spent by semi-public organizations in war relief, welfare work among soldiers, etc. These would probably total considerably over a billion dollars.

[3] 4.9+5.6+0.3=10.8.

[4] See *supra*, p. 50.

during the war years a figure not appreciably less, in terms of 1913 prices, than either the total amount of increase in national income during the same period, namely 10.8 billions, or the total cost of the war to May 1, 1919, namely 10.4 billions.

As compared with 1913, there was therefore no decrease in the average national standard of living and no impairment of capital resources, and the war cost was met from the increase in national income resulting from an increase in national production.[1]

Professor Davenport appears to have reached his conclusion that the war expenditures necessitated a reduction of the national standard of living, partly on the assumption that there was no increase in production, partly as the result of an overestimate of the proportion of the national income necessary to meet the war cost. On the basis of an estimate of 40 billion dollars as the national income in 1914 and of a war budget of 15 billion dollars presumably for each year of war, he arrived at the figure of 40 per cent as the ratio of war cost to total national income. To take income, even assuming no increase since 1914 in real income, at the 1914 price level, and to set against it war expenditures at the inflated price levels of the later years, is to exaggerate in unjustifiable degree the real extent of the war burden. Moreover, his figure for war expenditures, even in terms of 1917 and 1918 prices, is unduly high, unless the loans to the Allies are included. These will be considered later.

It may be objected that the increase of population during the period from 1913 to 1918 required an increase in national income if the 1913 standard of living were to be maintained. The census estimate for the increase in population from 1913 to 1917 is about 5,000,000, or approximately 6.7 per cent of the population in 1913. But the increase in these war years is estimated at practically the pre-war rate, whereas immigration declined

[1] Purchases of war bonds would, of course, be entered as private savings and be included in the gross figure of national savings. If the remainder of the increase in new savings were not used indirectly or directly to provide funds for the prosecution of the war, there would result a net increase in capital resources. The remainder of the war cost would be met, however, by a decrease in consumption. To this extent the conclusions reached here are subject to modification. But 70 per cent of the war cost, including loans to the Allies, was financed by the flotation of bonds. Of the remaining 30 per cent which was financed from tax revenue, a good part must have been paid out of savings from increased incomes.

heavily and emigration increased. Moreover, in calculating the income necessary to maintain the pre-war standard of living among the civilian population, deduction must be made of a sum sufficient to meet the normal consumption of the several million soldiers and sailors and such of their dependents as were maintained out of the war budget. To charge their consumption against both the civilian budget and the war budget is to count it twice. If allowance is made for these factors, the increase in population may be disregarded without serious error.

On superficial examination it might appear that similar allowance should be made for the consumption of all whose maintenance was provided either directly or indirectly out of the war budget. But the estimate of national production was based on the index of production, including the production of ordnance, munitions, and other war material. If the consumption of the war workers were to be deducted from the national consumption, on the ground that it was provided for out of the military budget, their production would then have to be deducted from the amount of national production, and the figure for national income would be reduced correspondingly. The civilian workers produced the income for both themselves and the military forces. Both the civilian war workers and the military forces received their income by means of the war budget, but the claims of the war workers on the war budget were offset by their additions to the national income.

LOANS TO THE ALLIES AND THE PROFITS OF NEUTRALITY

So far only the war cost has been considered as a drain upon income. But by May 1, 1919, the United States had lent to the Allies approximately 9 billions of dollars. Although these are properly to be considered as investments and not as expenditures, it is nevertheless true that in so far as income available for consumption is concerned lending to the Allies would have exactly the same effect as expenditure outright on the war program. This would lead to the conclusion that while there was an increase in national income during the war period adequate to meet the war budget without necessitating a lowering of the standard of living, nevertheless it was necessary, to meet the demands on the United

States for credits to the Allies, that there should be a restriction of consumption.

There is still to be considered, however, the increase in national income during the period of American neutrality. Taking 1915, 1916, and the latter half of 1914 as covering the period of neutrality, there was an increase in income on the basis of 1913 prices of 2.4 and 3.8 billions respectively in 1915 and 1916, and a loss for the whole of 1914, all of which may be taken as having occurred in the latter half of the year, of 0.30 billions, a total gain in income of approximately 6 billions. The loans to the Allies were made chiefly in 1918 and 1919. On the basis of the 1913 price level they would amount to approximately 4.6 billions. The United States produced enough in the war years to meet the war cost, and produced more than enough in the years of neutrality to extend the credits to the Allies without encroachment upon the average national standard of living.

THE SOURCES OF THE GOVERNMENT WAR-TIME REVENUE

Professor Davenport claims that the war cost was met chiefly by borrowing from the capitalist class the excess profits which inured to them through the widened gap between prices and wages. Of the total expenditures of the United States government from April 6, 1917, to June 30, 1919, amounting to $32,427,000,000, about 29 per cent was met from taxation and other revenues than loans.[1] In these expenditures were included the loans to the Allies, which would ultimately be repaid, and government investments in ships, War Finance Corporation stock, federal land bank bonds, and other income-yielding assets. This would leave an increase in indebtedness as a result of the war of considerably less than 23 billions of dollars if loans to the Allies be not deducted. If these loans be deducted, the net increase in indebtedness would be considerably less than 14 billions of dollars. It still remains true, however, that the cost of the war was met temporarily chiefly by loans instead of taxes.

The war loans in spite of their superficially wide distribution were absorbed mainly by the wealthier classes and by financial

[1] Letter of Secretary Glass to Congressman Fordney, July 9, 1919, in *Federal Reserve Bulletin*, August 1, 1919, p. 725.

institutions. The small subscriptions bulked large only for the last three loans, and many of the small holdings were soon transferred to the traditionally investing classes at a loss to the original subscribers. It still remains to be proved, however, that the funds which the wealthier classes subscribed to the war loans were war profits, in excess of normal, and obtained through the lag of wages behind prices.

There is a remarkable scarcity of reliable data upon which to base conclusions with regard to changes in the distribution of the national income among the various economic groups. This is particularly true with regard to the income of professional classes, of domestic servants, of real estate owners, of farmers, and of unorganized labor. An attempt follows to utilize such material coming from official or otherwise unquestionable sources as has come to the attention of the writer.

PROFITS DURING THE WAR PERIOD

Professor Friday presents the following figures for the net income before taxation of corporations in the United States for the years 1913 to 1918, consisting in part of returns of the Commissioner of Revenue and in part of estimates based on published reports of the corporations.[1] For purposes of comparison, the Bureau of Labor Index for Wholesale Prices is also included in the table.

Years	Net Income of All Corporations in the United States in Millions	Percentage Increase Over 1913	Net Income of 224 Industrial Corporations in Millions	Percentage Increase Over 1913	Bureau of Labor Wholesale Price Index
1913	$ 4,340	....	$ 507	....	100
1914	3,711	14.5	381	—24.9	99
1915	5,184	19.4	664	31.0	100
1916	8,766	102.0	1,364	169.0	123
1917	10,500	141.9	1,750	245.1	175
1918	9,500	118.9	....	....	185

The increase in corporation incomes for every year in the period was thus relatively much greater than the rise in prices. The increase in the returns of two hundred and twenty-four

[1] David Friday, "The War and the Supply of Capital," *American Economic Review Supplement*, March, 1919, p. 89.

industrial corporations for which Professor Friday could find continuous data was relatively so much greater, however, than the increase in corporation earnings in general as to indicate that not all kinds of corporations fared well during the period, and that while abnormal profits inured to industrial concerns as a whole, other corporations, especially those operating public utilities, suffered from an increase in costs not wholly compensated for by increases in the prices they were permitted to charge for their services. It should also be noted that returns are prior to taxation, and that the increasing rates of taxation in the later years made substantial reductions in the percentages of increase in net income. On the other hand, these returns were made primarily for taxation purposes, and there would be operative, therefore, a tendency to make them as small as possible. Moreover, under the involved provisions of the tax laws, "taxable income" was often an uncertain quantity, with somewhat distant relationship to real income. Many income-tax returns were made low, in the hope that there would be no protest from the Treasury, and in the reasonable certainty that any demand for an upward revision would not come until some time had elapsed. In the interval the use of the funds could be enjoyed. Other returns were made unduly low because of honest misunderstanding of the requirements of the tax legislation. It is a widely held opinion that the income-tax returns of 1917 and 1918 have still considerable scrutiny to undergo before their final approval.[1]

While corporation incomes as a whole have risen more rapidly than prices, interest payments on bonded obligations incurred prior to 1914 have remained at the pre-war rate. The bondholders as a class received the same money income in 1918 as in 1914 on their old investments. This must have resulted in a greater increase in corporation income distributed among common shareholders or charged to surplus available for distribution as dividends in the future than in corporation income as a whole. For the economic group deriving their income from corporation earnings,

[1] Since this was written, Professor T. S. Adams, Tax Adviser to the Treasury, has estimated at $1,000,000,000 or thereabout the amount of additional tax revenue which would accrue from careful auditing of tax returns. This amount is, of course, much less than the amount of undervaluation in the tax returns represented thereby.

the war brought increased real earnings if they were shareholders, decreased real earnings if they were bondholders, brought fortunes to shareholders in industrial concerns, misfortune to both shareholders and bondholders in public utilities.[1]

THE CONTRIBUTION OF INDUSTRIAL LABOR TO THE WAR COST

In the following table two indexes for wages during the years 1913 to 1918 are compared with the rise in wholesale prices and in the cost of living:

Union Rates of Wages per Hour*		Wholesale Prices§		Average Weekly Earnings in N.Y. State Factories. All Employees, Office and Shop†		Cost of Living in Country as a Whole Excluding Agricultural Communities‡	
Date	Index	Date	Index	Date	Index	Date	Index
				June, 1914	100	1913	100
May 1, 1913...	100	1913	100	June–Dec., 1914	98	July, 1914	101
May 1, 1914...	102	1914	99	Jan.–Dec., 1915	101	Dec., 1914	103
May 1, 1915...	103	1915	100	Jan.–Dec., 1916	114	June, 1915	103
May 1, 1916...	107	1916	123	Jan.–Dec., 1917	129	Dec., 1915	104
May 1, 1917...	114	1917	175	Jan.–Dec., 1918	160	June, 1916	110
May 1, 1918...	133	1918	197	Jan.–April, 1919	176	Dec., 1916	118
		Jan.–April, 1919	201			June, 1917	129
						Dec., 1917	142
						June, 1918	158
						Dec., 1918	174
						Spring, 1919	175

* United States Bureau of Labor Statistics, *Monthly Labor Review*, March, 1919, p. 119.
† New York State Industrial Commission, *Labor Market Bulletin*, September, 1919.
‡ *Monthly Labor Review*, October, 1919, p. 1, and November, 1919, p. 193.
§ *Ibid.*, February, 1919, p. 104, and November, 1919, p. 153.

No other comprehensive indexes of the trend of wages than those presented above have been found. The Bureau of Labor index of union rates of wages per hour is compiled from the minimum rates agreed upon by labor and employers. In some cases higher rates than these were in effect, but these minimum rates were usually the prevailing rates.[2] This index does not reveal the amount

[1] The relative trend of index numbers published by various newspapers for bond prices, industrial shares, and railroad shares on the stock market since 1913 confirms this conclusion.

[2] "Union Scale of Wages and Hours of Labor," *United States Bureau of Labor Statistics Bulletin No. 214*, May, 15, 1916, pp. 10, 11.

"The union scale, as the term is here used, is a statement, either written or definitely understood, of wages and hours of labor agreed to or accepted by an organi-

of increase in actual earnings in so far as such increase is due to fuller employment or to payment of higher rates for overtime work. On the other hand, a recent study of the length of the workday reveals a widespread tendency since 1913 toward a reduction in the number of hours worked each day.[1] This index fails also to throw any light on the trend of earnings of unorganized industrial labor.

The New York state index for average weekly earnings is based on returns for one week in each month including the fifteenth of the month, and is obtained by dividing the total weekly pay-roll by the total number of employees on the pay-roll for the given week. It should represent accurately the average earnings actually received by factory workers in New York state, office workers included. But the New York experience may not have been typical of the country as a whole. Moreover the average weekly earnings indicated by the statistics upon which the index is based were so low in the early years of the war period[2] that they suggest the question whether the workers covered by this index do not include an unusual proportion of cheap factory and office labor, and especially of female labor, than is typical of American industry as a whole. If such be the case it is also a possibility that the classes of labor which were relatively most poorly situated with regard to earnings at the outbreak of the war may have profited most as a result of the war conditions.

For the purpose of reaching conclusions with regard to the earnings of labor as a whole, this index has the further defect that it does not include non-factory labor, such as transportation workers, employees in the building trades, government employees, and wage earners in mercantile establishments and in offices not connected with factories. Finally, it is open to question in the

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zation of union men and an employer or group of employers, under which agreement, express or implied, union men actually are working. The union scale usually fixes the limit in only one direction. It sets a minimum wage and a maximum of hours for a regular day's work. . . . . As a general rule the union scale represents the prevailing wage of a locality for efficient labor."

[1] *Monthly Labor Review*, November, 1919, pp. 197, 198.

[2] They were $12.48 in 1914; $12.85 in 1915.

absence of further data whether an index of earnings for New York state is fairly comparable with an index of cost of living for the country as a whole. For all these reasons, confident conclusions cannot be based on these data alone. They must be used, therefore, only as suggesting and not as proving conclusions.

Two issues, largely independent of each other, are involved in the comparison of wages with prices. In a search for the source of expanded war-time profits of business enterprise, and of its relationship with the remuneration of labor, the relevant comparison is between rates of wage and wholesale prices. A third factor, of possibly quite considerable importance here, is the relative effectiveness of each unit of labor in the war years as compared with the pre-war period. Data on this point are not available. Pointing in the direction of decreased effectiveness are the emergency redistribution of labor from old occupations to new; the extension of industries of importance to the military program under disadvantageous emergency conditions; the not infrequent reports of ca' canny practice among labor during the war period; and probably increased rates of turnover of labor. Suggesting increased effectiveness are the intensive training of hitherto unskilled labor for skilled work; the patriotic stimulus; the increased use of labor-saving devices; the full utilization of existing plant, appliances, stocks of materials, and administrative and executive organizations. Which of these sets of factors predominated it appears impossible to say. That the net change, whatever its direction, was important, is unlikely.

The second issue is concerned with the welfare of the laboring classes and more especially the integrity of their standard of living during the war period. Here a comparison of earnings, and not *rates* of wages, with cost of living, and not wholesale prices, is pertinent. The indexes given above show an approximately complete correspondence until 1918 between the increase in earnings in the state of New York and the increase in cost of living for the country as a whole. In the one year, 1918, there appears to have been some lag of earnings behind cost of living. This indicates, what has already been suggested, that the contribution of labor to the

cost of the war was made through increased production and not to any important extent, if at all, through decreased consumption.

Comparison of the increases in rates of wages indicated by these indexes with the rise in wholesale prices shows that rates of wages per hour failed by a great margin to keep up with the rise in prices in 1917 and 1918. This lag of wages, an important element in costs of production, behind the prices secured by the manufacturers for their products points to an important source of the great increase in the earnings of industrial corporations during the war period. Price inflation, as Professor Davenport claims, does appear to have operated to reduce the rate of return to labor and to transfer this saving in cost to the employer in the form of increased profits.

Not all of the increase in profits necessarily was secured at the expense of labor. As has been pointed out by Professor Moulton,[1] in those lines of manufacture in which there was increased output from the same plant, there was a saving in overhead cost per unit which would have enabled producers to maintain profits even though prices of their products did not rise in full proportion to the increase in wage rates. But even though it be granted that all the savings in overhead resulting from increased output should be added to the profits of the producer, and that labor had no claim to a share in these, it would still have been true that the additional margin of profits resulting from the lag of wage rates behind prices was obtained at the expense of labor. As there is no question that these extra profits were to some extent invested in war loans, to that extent at least Professor Davenport is justified in his claim that these profits represented a contribution by labor to the cost of the war, paid to the employers, and lent by them to the government. To some extent, however, these profits were taken by the government as income and excess-profit taxes, and except for the stimulus to price expansion resulting from this method of indirect contribution, the ultimate results were to this extent what they would have been if labor had been directly taxed to the same extent.

[1] H. G. Moulton, "War Finance and the Price Level," *Journal of Political Economy*, XXVII, 701.

RATES OF WAGES, WEEKLY EARNINGS, AND FAMILY EARNINGS

Professor Moulton, in the same article,[1] states that the problem whether the increase in the monetary income of the laboring classes resulted in an increase of real wages depends upon whether prices increased more rapidly than family monetary income, and proceeds to express the opinion that during the first year of the war (i.e., the first year of American participation therein) the *family* money income increased more rapidly than did the price level among many classes of laborers. Unquestionably the rise in money wages was not equal in all industries and for all occupations. In some industries, real earnings per employee went up, in some they fell. But for industry as a whole the best available data indicate constant weekly real earnings per employee until 1918, and a fall in real earnings in 1918. On what grounds can it be claimed that *family annual earnings* rose, while *individual weekly earnings* remained constant, or even fell?

Professor Moulton claims that at the time of the entrance of the United States into the war there was a considerable volume of unemployment in the country and a great deal of part-time work, that the first effect of the war was to decrease the number of unemployed, that a second effect was to increase the number of days per year worked by those already employed, that a third effect was to provide overtime work at higher rates of pay, and that a fourth was to draw more members of the family into the wage-earning classes. Production, however, as indicated by both Mitchell's and Anderson's indexes, and as a matter of current knowledge, had already very nearly reached its height by 1916, and there was little margin either in equipment or in labor for further expansion. The Bureau of Labor Statistics index for employment for thirteen of the most important industries shows an unquestionable increase in the number on the pay-roll following the entrance of the United States into the war for only one, the iron and steel industry, and substantial decreases in employment in most of the others.[2] This indicates that shipbuilding and other war industries in which expansion came after the entrance of the United States into the war, obtained their supplies of labor from

[1] *Op. cit.*, p. 709. [2] *Monthly Labor Review*, January, 1919, p. 140.

the nonessential industries. There was no important army of unemployed to be utilized. Nor is it any more probable that there was an unusual amount of part-time work just prior to April, 1917, unless it was voluntary on the part of the workers. Moreover, the index for weekly earnings given above shows the full effect on earnings of any increase in the number of hours worked per week, including overtime work at higher rates. The net amount of overtime work done during the war period is probably generally overestimated. There was widespread complaint on the part of the employers during the war that employees were working overtime hours at overtime pay one day in order to absent themselves from work next day. There remains the possibility of increased earnings through working more weeks per year. But as compared with 1916 there could have been but a slight decrease in involuntary unemployment in 1917 and 1918. The increase in the number of wage-earners in the family could not have been a factor of great importance. As has already been indicated, most of the female labor recruited for the war industries was withdrawn from other employments. There was left, as an emergency source for additional wage-earners in a country without a male idle class, only the youths who had not reached the age at which they would ordinarily have entered into industry.

There seems little reason to suppose, therefore, that the trend of family earnings was very much different from the trend of individual earnings. Moreover, if standard of living is in question, where wages are maintained at the same real level or are only slightly increased by dint of loss of home life and home conveniences or by the cessation of schooling by youths, or even by increased hours of labor, there results a distinct loss in the standard of living, the increase in monetary, or even real wages, notwithstanding. This loss is more apparent, although not more real, where entrance of the women folk of the household into industry increases the monetary expense of the domestic economy.

One possible factor operating to increase family earnings, not already considered, but which should be accounted for in an index of average weekly earnings, is the movement of wage-earners from poorly paid nonessential occupations to well-paid war work. But

to whatever extent this factor and the ones already considered may have increased the family earnings, it still remains true that prices rose more rapidly than rates of wages,that profits consequently increased faster than prices, and that labor made its contribution to the cost of the war in large part via war profits lent to the government. In this respect, however, industrial wage labor was in a not very different situation from that of the salaried classes or the bondholder class in general, or of all those, bondholders and stockholders alike, who were financially interested in public utilities. The entrepeneur paid interest on his bonded indebtedness at the pre-war rate. He bought transportation, power, heat, and light from franchise corporations, and he hired his salaried employees at rates only slightly above the pre-war levels. He sold his own products at the war-time level of prices.

THE CONTRIBUTION OF AGRICULTURAL WORKERS TO THE WAR COST

The following table presents wage and price data for agricultural laborers and farmers. The data collected are not adequate

FARM WAGES AND PRICE INDEXES*

Year	Wages of Male Farm Labor†				Year	Prices of Articles Farmers Buy‡	Year	Prices of Farm Crops to Producers†	Prices of Meat Animals†
	By the Month		Day Labor at Harvest						
	With Board	Without Board	With Board	Without Board					
1913	100	100	100	100	1913–14	102	1913	100	100
1914	98	99	99	98	1914–15	104	1914	89	103
1915	99	99	99	99	1915–16	112	1915	93	94
1916	109	108	108	107	1916–17	124	1916	141	111
1917	135	133	132	131	1917–18	162	1917	194	164
1918	163	155	169	166			1918	224	192

* Compiled from *United States Department of Agriculture Year Book*, 1918, pp. 698, 701.

† 1913 = 100.

‡ Five-year average, 1909–10 to 1913–14 = 100. Read from graph.

material upon which to base any very confident conclusions. The annual amount of crop yield, for instance, is involved before any opinion on the share in the war cost borne by the farmer can be

reached. In so far as price factors are concerned, however, these figures indicate that the rise in the prices of the things which farmers sell was greater during the war period than was the rise in the prices of the articles which farmers buy, and was also greater, on the whole, than the rise in the wages of farm labor. The farm laborers seem to have fared better than their brethren in the city factories. For both groups the rate of wages rose less rapidly than did the general price level. On the other hand, there was probably a smaller rise in the cost of living of the farm laborer than in that of the city dweller, and his rate of wages rose more rapidly than did that of organized industrial labor. For the farm laborer as for the city laborer, but in less degree, the rise in prices appears to have operated to increase the profits of his employers partly at his expense.

WAR-TIME INCOME FROM URBAN PROPERTY

Rents on urban property increased quite generally during the war period, but the percentage of increase appears to have varied greatly according to the class of property and its location.[1] The average percentage of increase in rents for urban property of all kinds for the country as a whole was unquestionably considerably less than the average rise in commodity prices or in cost of living. This would indicate that the urban landlord also suffered a decrease in real income as a result of price inflation. At least two-thirds of the costs involved in property ownership consist—or did before the war-time rise in costs of maintenance and operation—in interest on capital invested, and much of the invested capital is borrowed on mortgage at pre-war rates of interest. Here again the property-owning group divides itself into two subgroups, of which one may have profited from the general rise in prices, and the other unquestionably lost. The legal owner—the property-entrepreneur he may perhaps be designated—was protected in large measure from the effects of a rise in the costs of maintenance, management, and fuel,

[1] Cf. "Wartime Changes in the Cost of Living," *National Industrial Conference Board, Research Report*, No. 9, pp. 22 ff. This report estimates the average rate of increase in the rent of workingmen's houses, from 1914 to the summer of 1918, at 15 per cent.

by the rise in rents such as it was, and by the mortgage contracts whereby much of the capital he controlled was intrusted to him for management at pre-war rates of interest. But for the mortgage-holder, as for the corporation bondholder, there was nothing to mitigate the loss in real income arising from a constant money income and rising prices.

THE DISTRIBUTION OF THE WAR BURDEN

Labor contributed a large part of the war cost. How large a part there has been no attempt here, with the inadequate statistical resources available, to discover. Its contribution was made mainly in the manner indicated by Professor Davenport, namely through a lagging of rates of wages behind prices, and a consequent increase in profits. Some of these profits were taxed away by the government; much of what remained was lent to the government. But the reduction in real rates of wages did not involve a serious impairment of the standard of living of labor and appears to have left it on the average at the 1913 level, since all, or most, of the fall in real rates of wages was made up, as compared with 1913 and 1914, by increased employment. The increased war-time profits came, therefore, not at all or only to a slight extent out of a reduction in consumption by the working classes, but was provided mainly by a war-time increase in national production. This increase in production resulted from the increased utilization of both the capital and the labor resources of the nation, and was sufficient not only to permit of the financing of the war without any impairment of the average national standard of living, but to make possible at the end of the war the possession of capital resources equal to what they would have been if there had been no war and if production had continued throughout this period at the pre-war rate. But even among wage labor there were certain classes of labor who profited from the war conditions, with the result that a study of average conditions does not reveal the extent to which the remaining classes of labor lost. Munitions workers, shipyard workers, garment workers, emergency employees of the government, shared with the employing class in the increased war-time pros-

perity. School teachers, most of the civil-service employees, salaried employees in general contributed most heavily.

That part of the war cost which was not contributed by clerical and industrial labor was probably contributed in largest part by those other groups such as bondholders, investors in public utilities, mortgage holders, and those engaged in professions to whose services there accrued an income at a considerably reduced real rate. The members of these groups were not able to make up the deficiency, as labor could, by increased effort, and therefore the war burden fell more heavily upon them than upon wage labor. There is some evidence, also, that the wages of agricultural labor lagged behind prices. Any increase in farmers' profits of which this may have been a cause was contributed only to a very small extent to the funds made available, whether by taxation or by loans, for the prosecution of the war. Owners of urban property did little more than hold their own against the rise in prices. The mortgage holders, who provide at least half the capital invested in real estate, received little or no increase in their money income to offset the rise in prices. There are practically no data of value, bearing upon the trend of middlemen's earnings or of professional incomes during the war period, and therefore these important shares of the national income have not been considered here.

AFTER-THE-WAR TAXATION

Professor Davenport's expectation that the repayment of the war loans will be effected through taxation which will fall mainly on the masses is, it is to be hoped, more speculative than prophetic. If the taxation system by which the loans will be repaid turns out to be in substance that which prevailed in pre-war days, he will be confirmed in his prediction. The pre-war federal tax system, with import duties and excise taxes on tobacco and liquors as its main sources of revenue, was certainly not progressive; it was possibly even regressive in its incidence. With the greater numbers in the lower economic classes than in the higher, and with the greater expenditure on commodities, relatively to total income, of poor than of rich, the bulk of the revenue came from the poorer classes.

The taxes may even have deducted a larger share from small incomes than from great.

The continuance of income taxation as an important source of revenue appears, however, to be inevitable. It is a good practical rule for income taxation as at present practiced that every considerable increase in the amount of revenue to be collected through an income tax results in an increase of the rate of progression of the tax. When taxes are not concealed nor uncertain in their incidence, the political resistance to greater taxation is much more vocal and effective on the part of the many poor than on the part of the few rich. In the modern democracy, the path of least resistance to the collection of increased revenue leads to the greater taxation of the larger incomes. The only feasible way of keeping such taxation within narrow limits by imposing a great share of the burden on the shoulders of the poor is to distribute the repayment of the war debt over a long period. There are practical limits, both narrow and inelastic, to the amount of taxes which can be collected in any one year from the working classes. But just as the poor who cannot pay cash for pianos can pay for them on the instalment plan, so the spreading of repayment of the debt over a long period of years can be effectively employed to assure substantial contributions from the working classes to the repayment to the wealthy classes of the war loans. Whether Professor Davenport's expectations will or will not be fulfilled may depend mainly upon whether a long or a short period is decided upon for the redemption of the war debt.

It is to be noted that the continuance of the present graduated taxation results during a period of rising prices in an increase from year to year in the percentages of the large incomes taken away in taxes, even though the nominal rates of taxation and the real incomes remain the same. Thus, if an income of $10,000 is subject to a 10 per cent tax and an income of $20,000 is subject to a 20 per cent tax; if the price level rises 100 per cent in a given year; if the money income just keeps pace with the rise in prices; then the same real income is taxed 10 per cent in the first year and 20 per cent in the second. Even if the present price level is maintained and no further rise occurs, the rates of taxation now levied bear more

heavily at present and will bear more heavily in the future upon the large incomes than they did when the war-tax legislation was enacted. This factor may tend of itself and without further legislation to make the tax system more steeply progressive in the future. On the other hand, a fall in the price level, if accompanied by a corresponding fall in money incomes, will make the present tax system less steeply progressive.

If the war debt is repaid from the proceeds of taxation falling mainly on the wealthy, the excess war profits will practically be canceled, and the imposition on labor of a double burden will be avoided. Considerations of social justice seem to point to such a result as a consummation devoutly to be wished. But no tax system can be so well devised as to correct with impartial justice the economic inequalities resulting from inflation.

INFLATION AND WAR FINANCE

The problem of war taxation was not so much one of the distribution of the war burden as of taxation versus loans, although, of course, the one problem was involved in the other. Admitting that the practical situation made it necessary that certain economic groups should pay for the war, was it also necessary that their contribution should inure in large part as profits to certain other groups, then to be turned over to the government as loans instead of as taxes? The answer to this rests on the degree of incentive necessary to induce capital to enter financially risky ventures essential to the war program. Some added profit was probably unavoidable if the full co-operation of capital and of business enterprise were to be secured. No bribe would have been too great to pay for the results accomplished, if a lesser bribe would not have sufficed. But a lesser bribe probably would have sufficed.

Finally, the point may be raised that the economic groups which contributed most heavily to defraying the cost of the war, through the tendency of their rates of remuneration to lag behind price movements, may reimburse themselves in a subsequent period of falling prices for such sacrifices as they may have made during the war period. In so far as *rates* are concerned, there is strength in this argument. But whereas the entrepreneur gains

through increased profits from rising price levels, he is enabled by reducing the scale of employment to free himself, in part at least, from the losses resulting from continued production at falling prices but undiminished rates of wages and interest. Fluctuating price levels injure those economic groups whose rates of remuneration are comparatively inelastic, regardless of the direction of the price movement. When prices fall, they lose through unemployment. When prices rise, they gain somewhat from fuller employment, but lose in real earnings per unit of service. There can be no thought of reimbursement at this late date. But Professor Davenport asks, on behalf of one of the economic groups which contributed in undue proportion to the defraying of the war cost, the least that can be asked, that it shall not be obliged to pay twice over.

JACOB VINER

UNIVERSITY OF CHICAGO